

CLAIMS

1. A radio receiving apparatus comprising:
a first estimator that obtains a first channel
estimation value of a known signal portion of a
5 received signal;
a second estimator that obtains a second channel
estimation value of a data portion of the received
signal;
a weighting system that weights the second
10 channel estimation value according to reliability
of a temporary decision value of the data portion;
and
a compensator that compensates for channel
variations of the data portion using a third channel
15 estimation value obtained by combining the weighted
second channel estimation value and the first channel
estimation value.
2. The radio receiving apparatus according to
claim 1, wherein said weighting system weights the
20 second channel estimation value by a value, which
becomes larger as likelihood of the temporary
decision value becomes higher, and weights the second
channel estimation value by a value, which becomes
smaller as likelihood of the temporary decision value
25 becomes lower.

3. A radio receiving apparatus comprising:
a first estimator that obtains a first channel
estimation value of a known signal portion of a

received signal;

a second estimator that obtains a second channel estimation value of a data portion of the received signal;

5 a deciding system that decides whether reliability of a temporary decision value of the data portion is high;

a selector that selects only the second channel estimation value corresponding to the temporary
10 decision value with higher reliability; and

a compensator that compensates for channel variations of the data portion using a third channel estimation value obtained by combining the selected second channel estimation value and the first channel
15 estimation value.

4. The radio receiving apparatus according to claim 3, wherein said deciding system decides that reliability of the temporary decision value is high when a signal point of the temporary decision value
20 belongs to a predetermined area on an I-Q plane.

5. The radio receiving apparatus according to claim 3, further comprising an error correcting system that performs an error correction to the data portion of the received data, wherein said deciding
25 system decides that the reliability of the temporary decision value is high when the temporary decision value matches an error-corrected value.

6. A communication terminal apparatus having

a radio receiving apparatus, said radio receiving apparatus comprising:

5 a first estimator that obtains a first channel estimation value of a known signal portion of a received signal;

a second estimator that obtains a second channel estimation value of a data portion of the received signal;

10 a weighting system that weights the second channel estimation value according to reliability of a temporary decision value of the data portion; and

a compensator that compensates for channel variations of the data portion using a third channel estimation value obtained by combining the weighted second channel estimation value and the first channel estimation value.

7. A communication terminal apparatus having a radio receiving apparatus, said radio receiving apparatus comprising:

20 a first estimator that obtains a first channel estimation value of a known signal portion of a received signal;

a second estimator that obtains a second channel estimation value of a data portion of the received signal;

a deciding system that decides whether reliability of a temporary decision value of the data

portion is high;

a selector that selects only the second channel estimation value corresponding to the temporary decision value with higher reliability; and

5 a compensator that compensates for channel variations of the data portion using a third channel estimation value obtained by combining the selected second channel estimation value and the first channel estimation value.

10 8. A base station apparatus having a radio receiving apparatus, said radio receiving apparatus comprising:

a first estimator that obtains a first channel estimation value of a known signal portion of a
15 received signal;

a second estimator that obtains a second channel estimation value of a data portion of the received signal;

a weighting system that weights the second
20 channel estimation value according to reliability of a temporary decision value of the data portion; and

a compensator that compensates for channel variations of the data portion using a third channel
25 estimation value obtained by combining the weighted second channel estimation value and the first channel estimation value.

9. A base station apparatus having a radio

receiving apparatus, said radio receiving apparatus comprising:

5 a first estimator that obtains a first channel estimation value of a known signal portion of a received signal;

a second estimator that obtains a second channel estimation value of a data portion of the received signal;

10 a deciding system that decides whether reliability of a temporary decision value of the data portion is high;

a selector that selects only the second channel estimation value corresponding to the temporary decision value with higher reliability; and

15 a compensator that compensates for channel variations of the data portion using a third channel estimation value obtained by combining the selected second channel estimation value and the first channel estimation value.

20 10. A radio receiving method comprising:

a first estimating step of obtaining a first channel estimation value of a known signal portion of a received signal;

25 a second estimating step of obtaining a second channel estimation value of a data portion of the received signal;

a weighting step of weighting the second channel estimation value according to reliability of a

temporary decision value of the data portion; and

a compensating step of compensating for channel variations of the data portion using a third channel estimation value obtained by combining the weighted
5 second channel estimation value and the first channel estimation value.

11. A radio receiving method comprising:

a first estimating step of obtaining a first channel estimation value of a known signal portion
10 of a received signal;

a second estimating step of obtaining a second channel estimation value of a data portion of the received signal;

a deciding step of deciding whether reliability
15 of a temporary decision value of the data portion is high;

a selecting step of selecting only the second channel estimation value corresponding to the temporary decision value with higher reliability;
20 and

a compensating step of compensating for channel variations of the data portion using a third channel estimation value obtained by combining the selected second channel estimation value and the first channel
25 estimation value.